

JAPANESE
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STANDARD

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JIS B 7526 : 1995

(Reaffirmed : 1996)

Squares

ICS 17.040.01

Descriptors : squares (instruments), steels, rulers

Reference number : JIS B 7526 : 1995 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

Date of Establishment: 1962-01-01

Date of Revision: 1995-04-01

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Squares

1 Scope This Japanese Industrial Standard specifies the steel squares of the construction as indicated in Figs. 1, 2, 3 and 4 (hereafter referred to as "squares").

Remarks 1 The normative references are as follows.

JIS B 7503 *Dial gauges*

JIS B 7506 *Gauge blocks*

JIS B 7513 *Precision surface plates*

JIS B 7514 *Steel straightedges*

JIS G 4303 *Stainless steel bars*

JIS G 4304 *Hot rolled stainless steel plates, sheets and strip*

JIS G 4305 *Cold rolled stainless steel plates, sheets and strip*

JIS G 4401 *Carbon tool steels*

2 The units and numerical values in { } in this Standard are based on the traditional units and are appended for informative reference.

2 Terms for principal parts The terms given for the principal parts of squares shall conform to those given in Figs. 1, 2, 3 and 4.

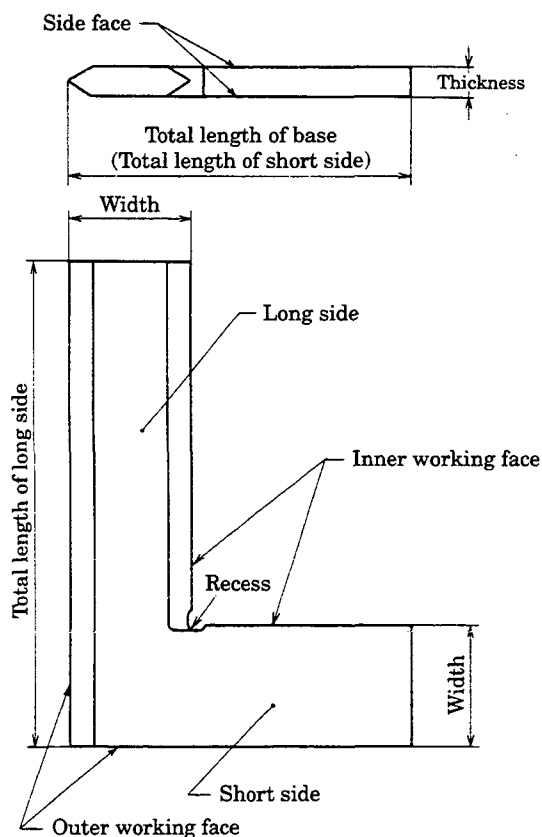


Fig. 1 Beveled edge squares

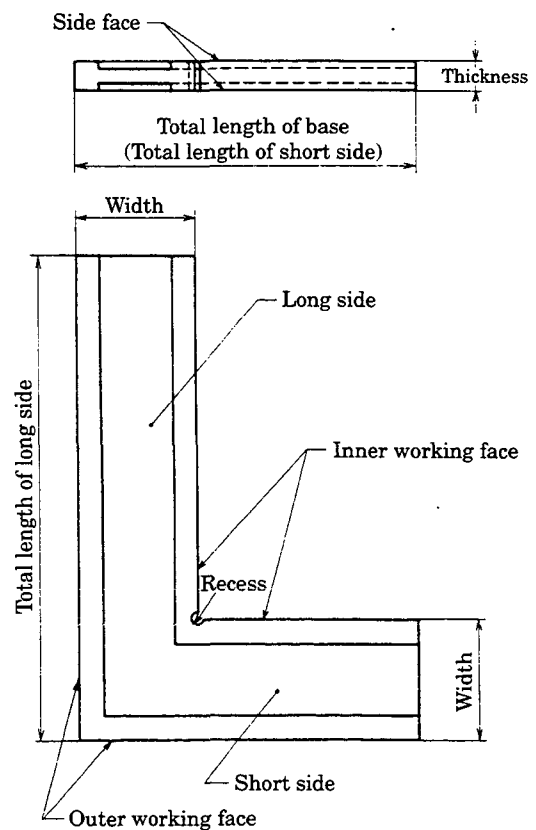


Fig. 2 I-Section squares

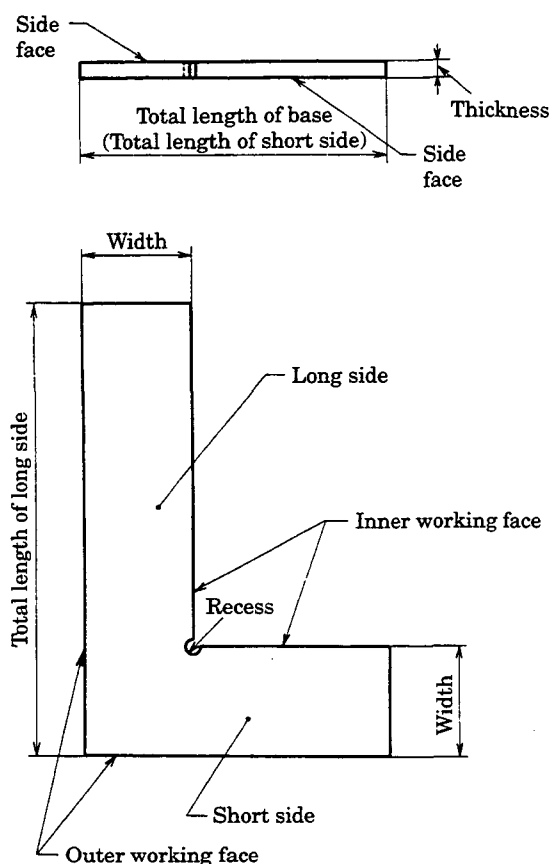


Fig. 3 Flat section squares

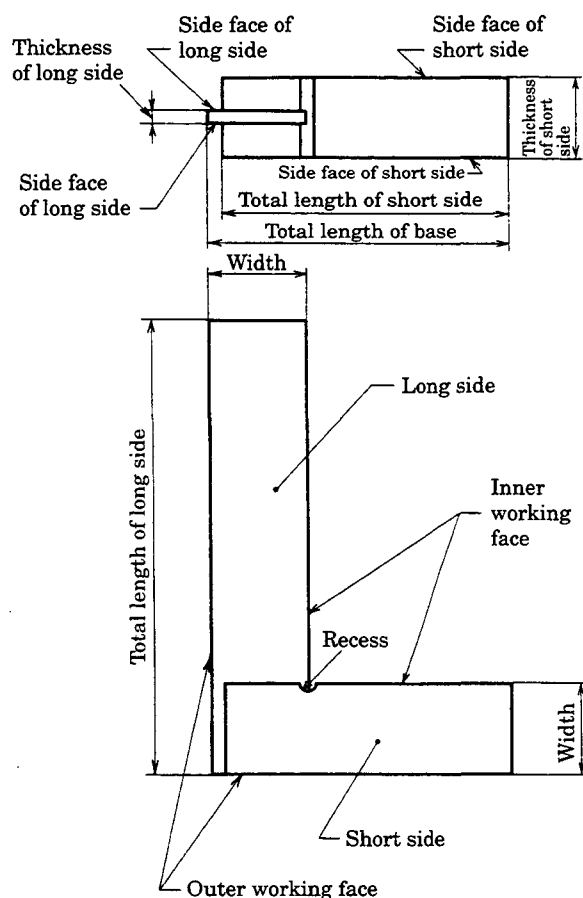


Fig. 4 Beam squares

3 Kind of squares and grade The kind of squares and grade shall be as given in Table 1.

Table 1

Kind of square	Grade	Where used (informative)
Beveled edge square	—	Used as standard square
I-section square	Grade 1	
	Grade 2	For inspection use
Flat section square Beam square	Grade 1, Grade 2	For workshop use

4 Squareness

4.1 Squareness of outside and inside working faces The tolerances on squareness of outside and inside working faces shall conform to Table 2, and signs indicating error values shall be in accordance with Fig. 5.

Table 2

Unit : μm

Nominal size (mm)	Tolerance on right angle					
	Beveled edge square	I-section square		Flat section and beam squares		Special grade (informative) ⁽¹⁾
		Grade 1	Grade 2	Grade 1	Grade 2	
75	—	—	—	± 14	± 28	—
100	± 3.0	± 3.0	± 7	± 15	± 30	—
150	± 3.5	± 3.5	± 8	± 18	± 35	—
200	± 4.0	± 4.0	± 9	± 20	± 40	± 3.0
300	± 5.0	± 5.0	± 11	± 25	± 50	± 3.5
500	—	± 7.0	± 15	± 35	± 70	± 4.5
750	—	—	—	± 48	± 95	—
1 000	—	—	—	± 60	± 120	—

Note ⁽¹⁾ As the squares of special grade are used for the purpose of measurement of high precision work, particular attention shall be paid to the selection of shape, size, construction and material against the effect of temperature and distortion.

Remarks : The values given in the Table are obtained from the following formulas. Where L indicates the nominal size in mm.

Unit : μm

Kind of squares	Grade	Formula for calculation of tolerance on right angle
Beveled edge squares	—	$\pm \left(2 + \frac{L}{100} \right)$
I-section squares	Grade 1	
	Grade 2	$\pm \left(5 + \frac{L}{50} \right)$
Flat section squares Beam squares	Grade 1	$\pm \left(10 + \frac{L}{20} \right)$
	Grade 2	$\pm \left(20 + \frac{L}{10} \right)$
Special grade (informative)		$\pm \left(2 + \frac{L}{200} \right)$